

REMARKS

The above amendments and these remarks are responsive to the Office Action issued on December 31, 2003. By this response, claims 1, 4, 6, 13, 16, 23, 26 and 27 are amended, and claims 30-33 are newly added. No new matter is introduced. Claims 1-16 and 23-29 are now active for examination.

The Office Action

The Office Action rejected claims 1, 2, 4-6, 11-16 and 26-28 under 35 U.S.C. §103(a) as being unpatentable over Salley et al. (U.S. Patent No. 5,254,952) in view of Suga et al. (U.S. Patent No. 5,789,935). Claims 3 and 7-10 stand rejected under 35 U.S.C. §103(a) as being obvious over Salley in view of Suga and further in view of Tanaka (U.S. Patent No. 4,895,308). Claims 23-25 were rejected under 35 U.S.C. §103(a) as being obvious over Salley in view of Suga, and further in view of Bertness (U.S. Patent No. 5,254,952). The examiner indicated that claim 29 is allowable.

The rejections are respectfully traversed in view of the claim amendment and remarks presented herein.

The Obviousness Rejection Based on Salley and Suga Is Traversed

Claims 1, 2, 4, 5, 6, 13-15, 16 and 26-28 were rejected as being obvious over Salley in view of Suga. The obviousness rejection is respectfully traversed because Salley and Suga cannot support a prima facie case of obviousness.

By this Response, claim 1 is amended. Claim 1, after the amendment, recites:

A method for evaluating the operation of an alternator
driven by a motor, comprising the steps of:
 detecting a motor speed or an alternator speed;
 coupling a load to the alternator upon the motor speed or
the alternator speed reaching a predetermined level; and

detecting characteristics of an alternator output signal representative of an alternator characteristic after the load has been coupled to the alternator for a first predetermined period of time, wherein the first predetermined period of time is fixed, and is chosen such that effects of noise caused by the step of coupling the load are reduced.

Thus, a method according to claim 1 detects characteristics of the alternator output after the load has been coupled to the alternator for a fixed predetermined period of time, such as 0.75 second, so that effects of noise caused by the coupling of the load are reduced. Appropriate support for the amendment can be found in, for example, Fig. 3; page 2, lines, 19-27; page 6, lines 25-31; and page 8, lines 3-18 of the specification. Independent claims 4, 13, 16, 23, 26 and 27 also are amended to include descriptions related to determining the health of the alternator based on alternator output signal received after a load has been coupled to the alternator for a fixed predetermined period of time.

In rejecting the claims, the Office Action relied on Salley in combination with a newly cited reference, Suga. The rejection is respectfully traversed because Salley and Suga, even combined, do not teach every limitation of claims 1, 4, 6, 13, 16, 23, 26 and 27, as amended.

Salley is related to a semi-automatic alternator/battery tester. A user connects the tester to an alternator that is driven by an automobile engine. When the engine speed reaches a predetermined level, the user pushes a start button on the tester to apply a load to the alternator. Salley also describes terminating the load test after a predetermined period of time (See Abstract; col. 10, lns. 19-58; and col. 33, lns.4-63 of Salley). The Examiner admitted that Salley does not teach determining the health of an alternator based on signals obtained after the load has been applied to the battery after a first predetermined period of time, but relied on Suga for teaching such features.

The language in Suga relied on by the Examiner recites “the current I_M becomes sufficiently stable thereafter, and the current I_M is then measured.” (See col. 5, lns. 38-40 of Suga) On its face, the description merely suggests that I_M is measured after the current is stabilized. It is understood that the time needed for the signal to become stabilized varies from circuit to circuit. Thus, even though Suga’s system may arguably wait for a period of time until the signal is stabilized before measurement can be taken, the length of such waiting time is indefinite, and differs from circuit to circuit. Thus, the waiting time in Suga is not a fixed period of time, as described in claims 1, 4, 6, 13, 16, 23, 26 and 27. Accordingly, Suga does not teach determining the health of the alternator based on alternator output signal received after a load has been coupled to the alternator for a fixed predetermined period of time, as described in independent claims 1, 4, 6, 13, 16, 23, 26 and 27.

Since both Salley and Suga fail to disclosure determining the health of the alternator based on alternator output signal received after a load has been coupled to the alternator for a fixed predetermined period of time, as described in independent claims 1, 4, 6, 13, 16, 23, 26 and 27, Salley and Suga, even combined, do not teach every limitation of the claims. Consequently, the obviousness rejection based on Salley and Suga is untenable and should be withdrawn. Favorable reconsideration of claims 1, 4, 6, 13, 16, 23, 26 and 27 is respectfully requested.

Claims 2, 5, 11, 12, 14, 15 and 28, directly or indirectly, depend on claims 1, 4, 6, 13 and 27, respectively, and incorporate every limitation thereof. Therefore, the obviousness rejection of claims 2, 5, 11, 12, 14, 15 and 28 based on Salley and Suga also is untenable and should be withdrawn based on the same reasons discussed in claims 1, 4, 6, 13 and 27, as well as on their respective recitations. Favorable reconsideration of claims 2, 5, 11, 12, 14, 15 and 28 is respectfully requested.

The Obviousness Rejection Based on Salley, Suga and Tanaka Is Traversed

Claims 3 and 7-10 were rejected as being obvious over Salley in view of Suga and Tanaka. The obviousness rejection is respectfully traversed because Salley, Suga and Tanaka cannot support a prima facie case of obviousness.

Claims 3 and 7-10 incorporate every limitation of claims 1 and 6, respectively, through their respective dependency thereof. As discussed earlier relative to claims 1 and 6, Salley and Suga, even combined, do not teach every limitation of claims. Thus, for at least the same reasons, Salley and Suga, even combined, do not teach every limitation of claims 3 and 7-10. Tanaka, the other reference relied on by the Examiner, does not alleviate the deficiencies.

Tanaka was cited by the Examiner for disclosing a Nichrome coil and a fan for use as a load and heat dissipation means. Tanaka, however, does not teach determining characteristics of the alternator output signal based on parameters collected after the load has been coupled to the alternator for a fixed period of time, as described in claims 3 and 7-10. Therefore, Salley, Suga and Tanaka, even combined, do not teach every limitation of claims 3 and 7-10. Thus, claims 3 and 7-10 are patentable over Salley, Suga and Tanaka. Favorable reconsideration of claims 3 and 7-10 is respectfully requested.

The Obviousness Rejection Based on Salley, Suga and Bertness Is Traversed

Claims 23-25 were rejected as being obvious over Salley in view of Suga and Bertness. The obviousness rejection is respectfully traversed because Salley, Suga and Tanaka cannot support a prima facie case of obviousness.

Claims 23-25, directly or indirectly, depend on claim 16, and incorporate every limitation thereof. Thus, Salley and Suga, even combined, do not teach every limitation of claims 23-25 for at least the same reasons discussed relative to claim 16, as well as their respective

descriptions. Bertness, the other reference relied on by the Examiner, does not alleviate the deficiencies.

Bertness was cited by the Examiner for teaching different signal transmission means used in signal communications. Bertness, however, does not teach determining characteristics of the alternator output signal based on parameters collected after the load has been coupled to the alternator for a fixed period of time, as described in claims 23-25 through their dependencies of claim 16. Therefore, Salley, Suga and Bertness, even combined, do not teach every limitation of claims 23-25. Thus, claims 23-25 are patentable over Salley, Suga and Bertness. Favorable reconsideration of claims 23-25 is respectfully requested.

New Claims 30-33 Are Patentable

By this Response, claims 30-33 are newly presented. Claims 30-33 indirectly depend from claims 4, 6, 13 and 27, respectively, and further describes that the load is decoupled from the alternator after the load has been coupled to the alternator for one second. Appropriate support for the new claims can be found in, for example, page 5, first paragraph of the specification. As discussed earlier, claims 4, 6, 13 and 27 are patentable over the documents of record. Therefore, claims 30-33 are also patentable over the documents of record for at least the same reasons discussed relative to claims 4, 6, 13 and 27 by virtue of their dependencies on claims 4, 6, 13 and 27, as well as for their own merits. Favorable consideration of claims 30-33 is respectfully requested.

CONCLUSION

Therefore, the present application claims subject matter patentable over the references of record and is in condition for allowance. Favorable consideration is respectfully requested.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

MCDERMOTT, WILL & EMERY

A handwritten signature in black ink that reads "Wei-Chen Chen". The signature is written in a cursive, flowing style.

Wei-Chen Chen

Recognized under 37 CFR §10.9(b)

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